

Abstract

a Inserts of metal ~~13~~^{*a*} in the plastic ~~11~~^{*a*} of the plastic structural element ~~57~~ are coated with a
5 coupling layer ~~12~~ of fibre-reinforced plastic, which reduces the abrupt change in stiffness
and/or coefficient of thermal expansion at the joining interfaces in the metal-plastic com-
posite. By altering the volume fraction of fibres and/or by ~~means of~~ different orientation of
the fibre layers within the coupling layer (~~12~~), a gradual change in the E-modulus and the
thermal expansion coefficient are produced, as a result of which abrupt changes in these
10 values at the composite interfaces can be avoided. The sudden change in stiffness between
a the plastic material ~~11~~ and the metal insert ~~13~~ is also reduced by reducing the stiffness of the
insert ~~13~~, which again is achieved by specific choice of shape. Preferred, in particular, is a
a finger-shaped fanning out of the insert ~~13~~ in the plastic material ~~11~~.

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~~15 (Fig. 4)~~